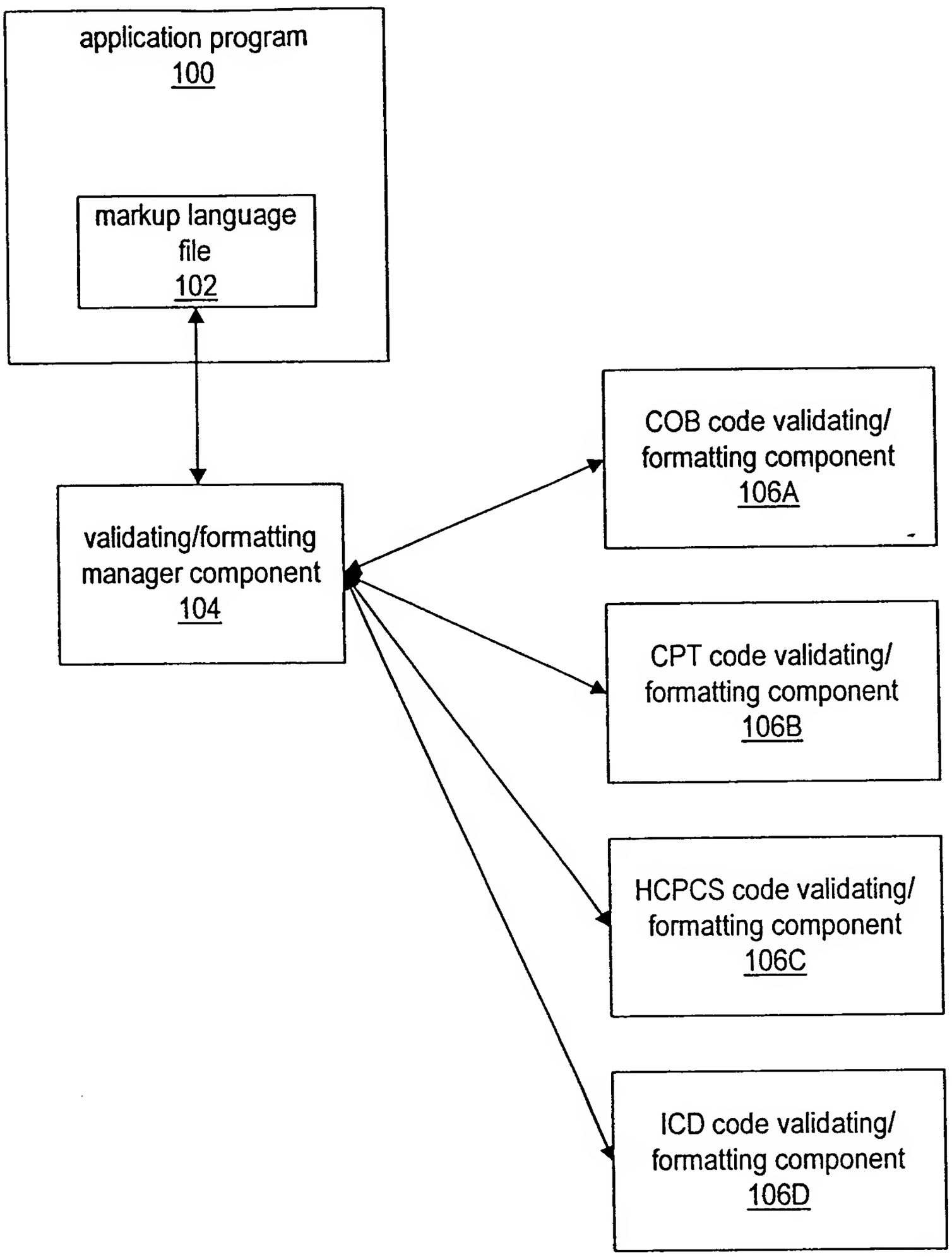

application program
100
markup language
file
102
validating/formatting
manager component
104
COB code validating/
formatting component
106A
CPT code validating/
formatting component
106B
HCPCS code validating/
formatting component
106C
ICD code validating/
formatting component
106D

Figure 1

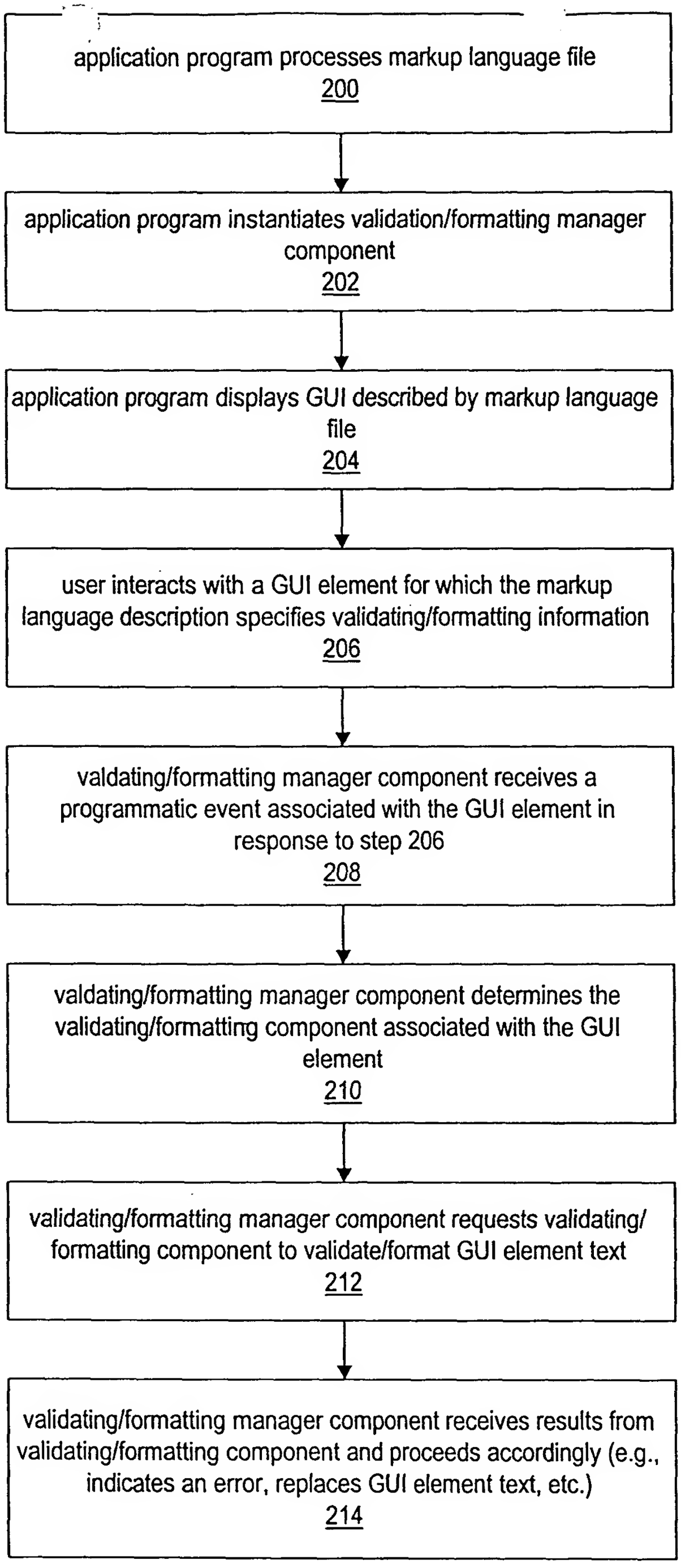
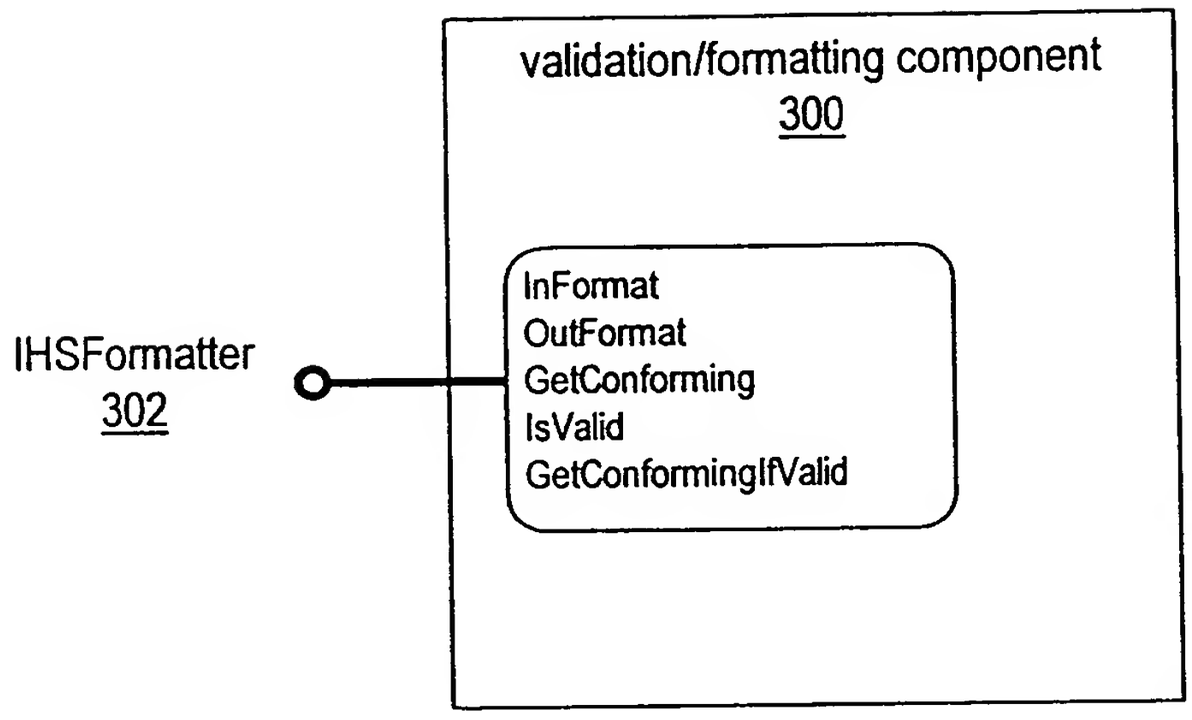

application program processes markup language file
200
application program instantiates validation/formatting manager component
202
application program displays GUI described by markup language file
204
user interacts with a GUI element for which the markup language description specifies validating/formatting information
206
valdating/formatting manager component receives a programmatic event associated with the GUI element in response to step 206
208
valdating/formatting manager component determines the validating/formatting component associated with the GUI element
210
validating/formatting manager component requests validating/ formatting component to validate/format GUI element text
212
validating/formatting manager component receives results from validating/formatting component and proceeds accordingly (e.g., indicates an error, replaces GUI element text, etc.)
214

Figure 2



Exemplary Validation/Formatting Object Implementations

IDC Code Formatter
CPT4 Code Formatter
HCPCS Code Formatter
COB Code Formatter
US SSN Formatter
US Currency Formatter
US State Formatter
Name Formatter
US Street Formatter
Time Formatter
Date Formatter
US Phone Formatter
EIN Formatter
DateTime Formatter
YesNo Formatter
Boolean Formatter

Figure 3

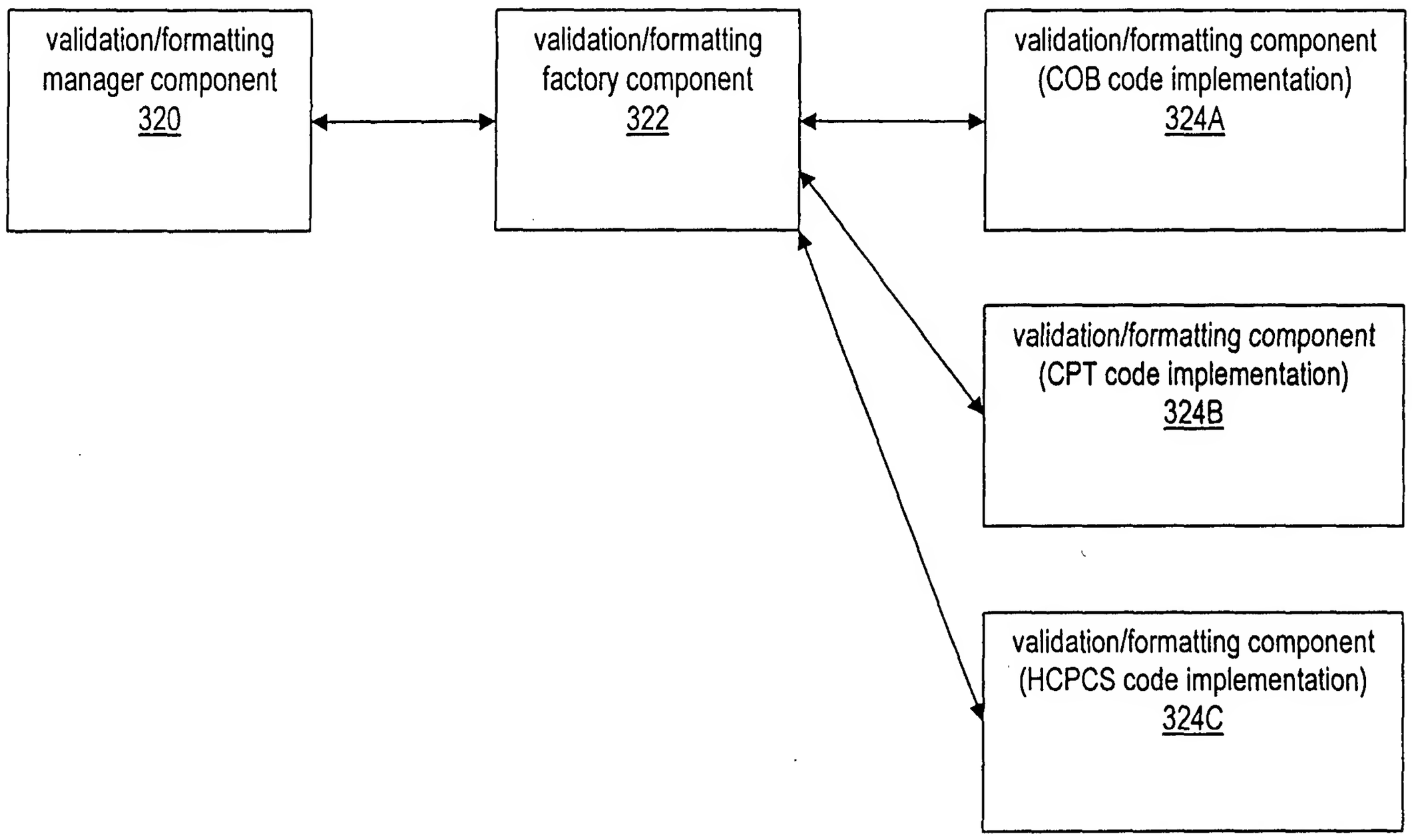

validation/formatting manager component 320
validation/formatting factory component 322
validation/formatting component (COB code implementation) 324A
validation/formatting component (CPT code implementation) 324B
validation/formatting component (HCPCS code implementation) 324C

Figure 4

Admission

Admission Date
Length of Stay
Admission Type

Clinical Information and other comments

N w Claim

Message

Unsubmitted

Medicare	Medicaid	CHAMPUS	CHAMPVA	Group Health Plan	FECA Black Lung	Other	1a. Insured's ID Number
1. ☐	☐	☐	☐	☐	☐	☐	

2. Patient's Name	3. Patient's Birth Date	4. Insured's Name
Find...	O M O F	
5. Patient's Address	**6. Patient's Relationship To Insured**	**7. Insured's Address**
	O Self O Spouse O Child O Other	
City, State	**8. Patient's Status**	**City, State**
AL	☐ Single ☐ Married ☐ Other	AL
Zip Code **Telephone**	☐ Employed ☐ Full-time Student ☐ Part-time Student	**Zip Code** **Telephone**

Fig 5A

9. Other Insured's Name	**10. Patient's Condition Related To** ☐ Employment? (Current or Previous) ☐ Auto-accident? State: CA ☐ Other accident?	**11. Insured's Policy Group or FECA Number**
9a. Tester Icd code		**11a. Boolean Tester** O M O F
9b. Yes No Tester O M O F		**11b. COB Code Tester**
9c. HCPCS Code Tester		**11c. Insurance Plan or Program Name**
9d. Insurance Plan or Program Name	**10d. Time Tester**	**11d. Is there another health benefit plan?** O Yes O No
14. Date time tester	**15. If patient has had same or similar illness, first date**	**16. Dates patient unable to work in current occupation** From: To:
17. Name of Referring Physician or other source Find...	**17a. ID Number of Referring Physician**	**18. Hospitalization dates related to current services** From: To:
19. Reserved for local use		**20. Outside Lab?** O Yes O No $
21. Diagnosis or nature of illness or injury		**22. Medicaid Resubmission** Code Orig. Ref No **23. Prior Authorization Number**

Fig 5B

24	A	B	C	D		E	F	G	K
	Date of Service (From/To)	Place	Type	Procedure Code (CPT/HCPCS)	Modifier Codes	Diagnosis Code	Charges ($)	Days/ Units	Reserved For Local Use
1	12/12/1998 12/12/1998	sdf			sdf				

Total Charge: $100.00
Total Amount Paid: $0.00
Balance Due: $100.00

25. Federal Tax ID Number	26. Patient's Account Number	27. Accept Assignment?
O SSN O EIN		O Yes O No O Both

32. Name and Address of facility where services were rendered	33. Physician's/Suppliers's Billing Name, Address, ZIP Code and Phone

Fig 5C

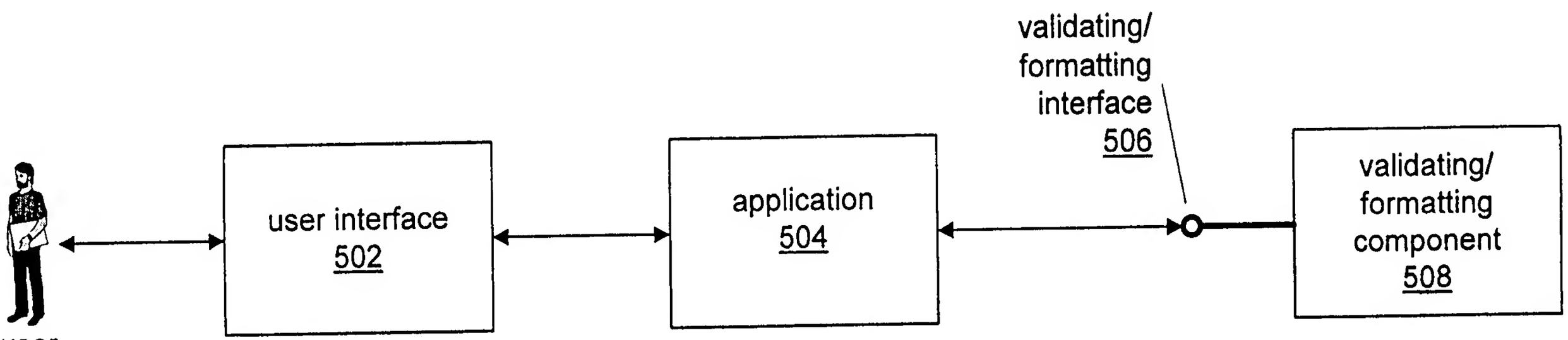

validating/
formatting
interface
506
user interface
502
application
504
validating/
formatting
component
508
user
500

Figure 6

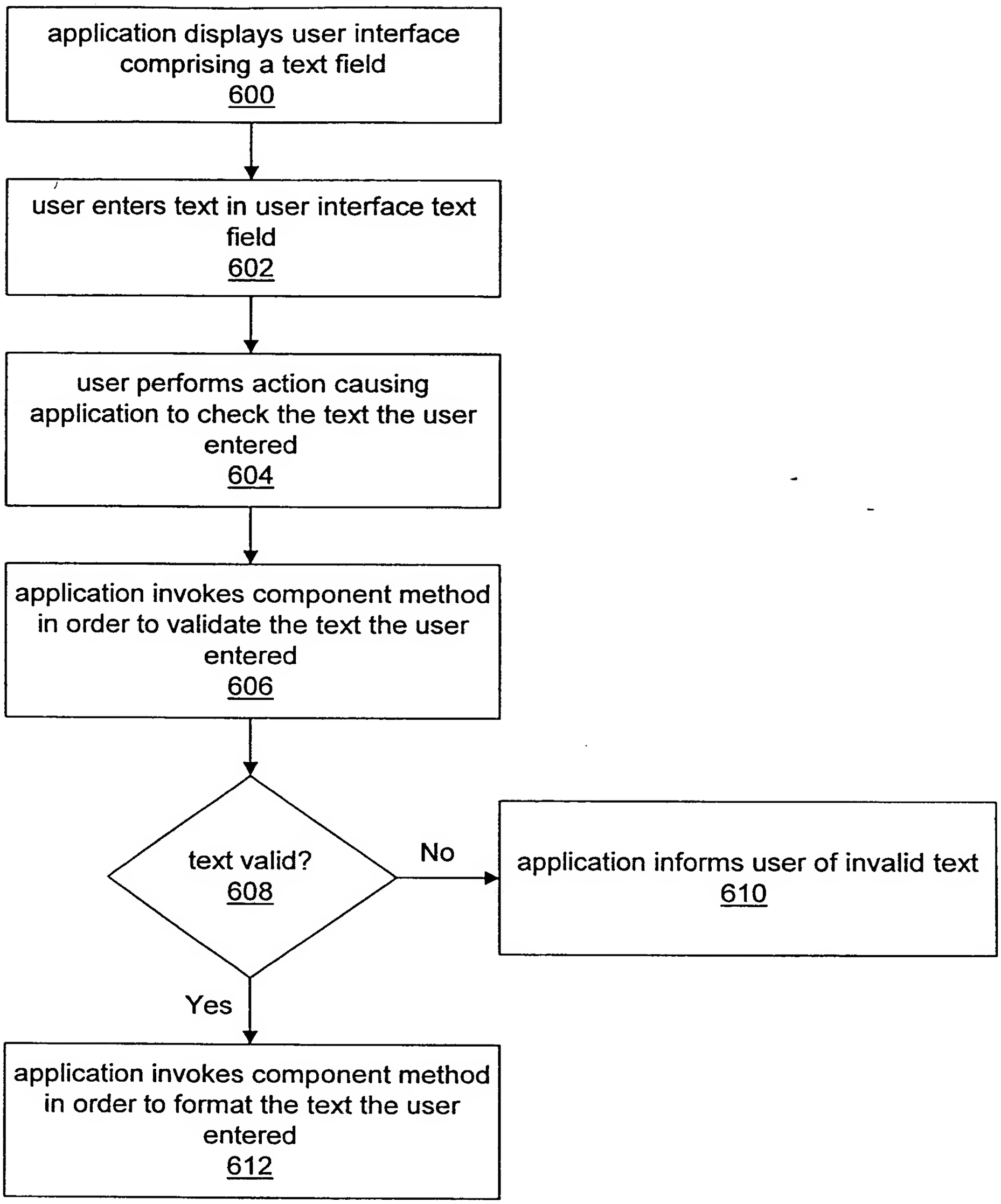

application displays user interface comprising a text field
600
user enters text in user interface text field
602
user performs action causing application to check the text the user entered
604
application invokes component method in order to validate the text the user entered
606
text valid?
608
No
application informs user of invalid text
610
Yes
application invokes component method in order to format the text the user entered
612

Figure 7

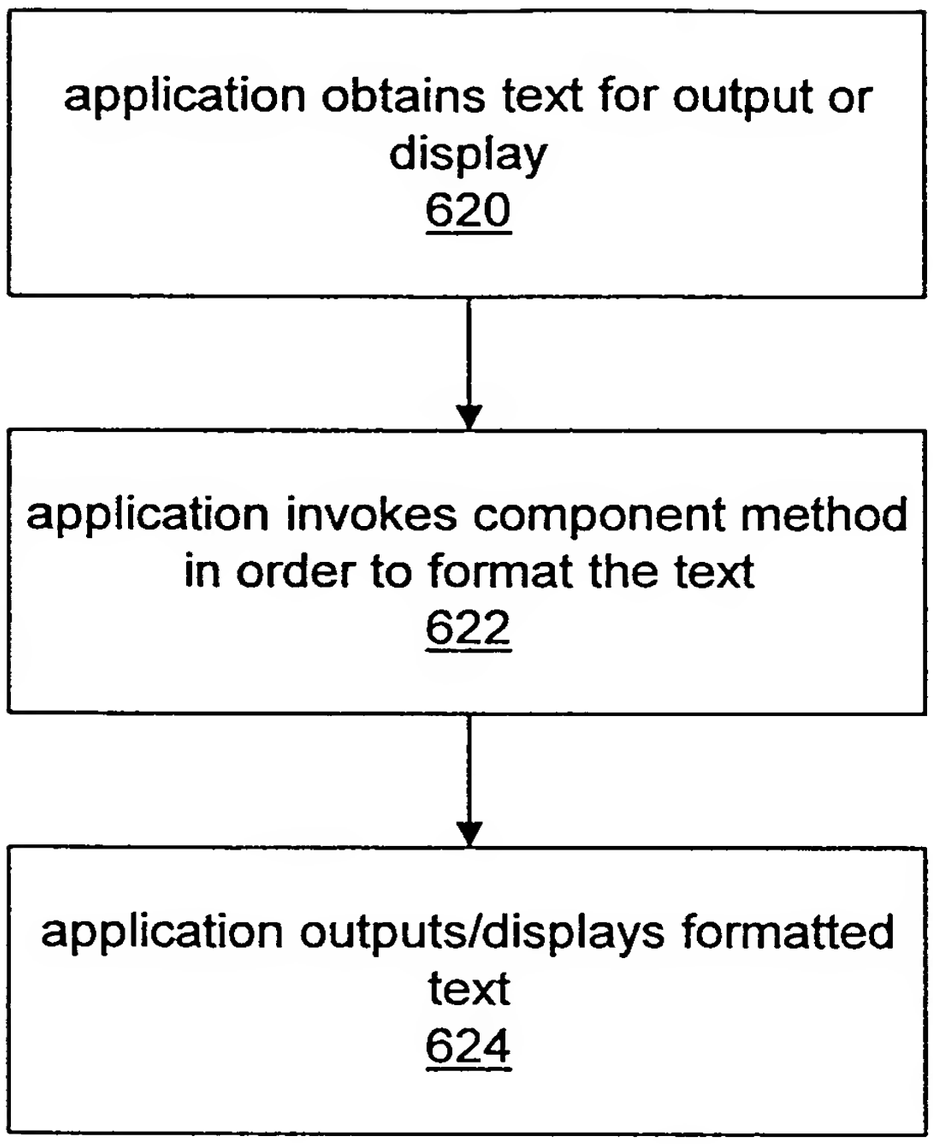

application obtains text for output or display
620
application invokes component method in order to format the text
622
application outputs/displays formatted text
624

Figure 8

Client Side

Server Side

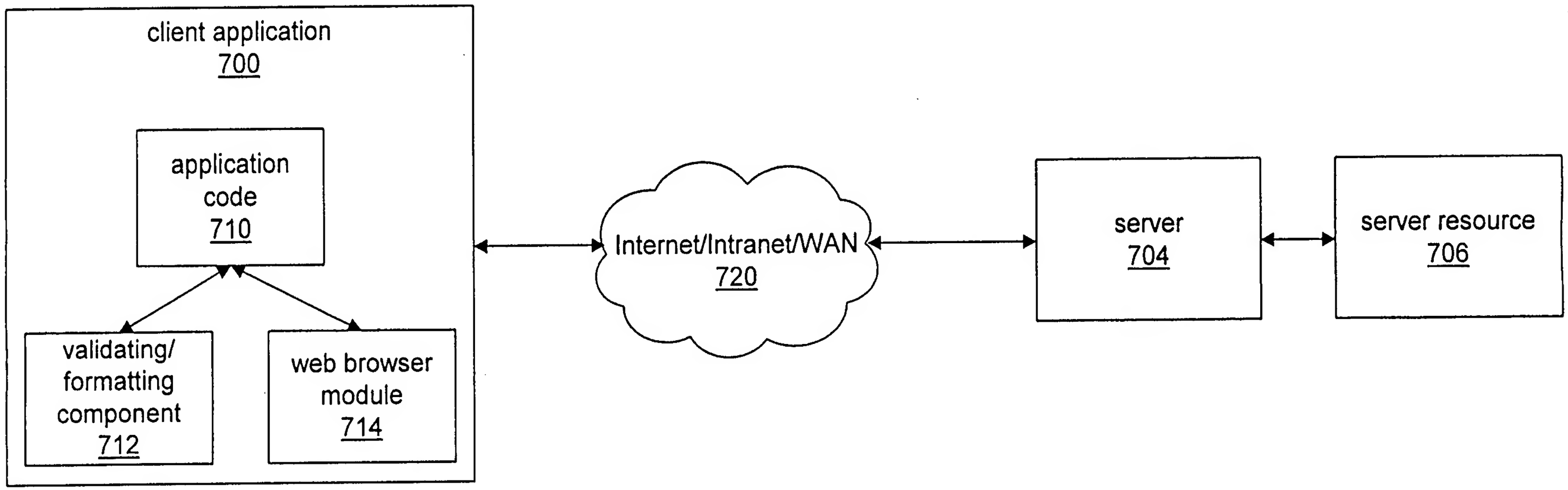


Figure 9